

**STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906**

**PUBLIC COMMENTS AND STAFF RESPONSE**

Water Board staff received comments from:

1. Teri Caddell, A-1 Septic Service, Inc. in a letter dated December 6, 2007.
2. G. Scott McGowen, Chief Environmental Engineer, California Department of Transportation, in a letter dated January 18, 2008.
3. John Ricker, Water Resources Division Director, Santa Cruz County Environmental Health Services, in an email dated January 23, 2008.

Below are staff responses to these comments. All comments are direct transcriptions from the letters unless otherwise noted.

**Comments and Responses – A-1 Septic Service**

**Comment 1**

...with regards to individual septic tank systems on private properties, we know that failing septic systems is one of the major contributors to the discharges with fecal coliform concentration exceeding water quality objectives in the San Lorenzo River Watershed... We also know that one of the main reasons for septic system failures is lack of maintenance, or pumping of the septic tanks every 2-5 yrs to remove the solids and prevent them from entering the drainfield trench and contaminating the ground and ground water, and to prevent surfacing effluent over the tank and drainfield areas that eventually end up in our waters. Enforcing regular pumping of these septic tanks would require notifying the property owners of their responsibility to do this. The following are ideas to put such notification into action:

1. Environmental Health Departments of Santa Cruz and Surrounding areas experiencing problems with overflowing septic systems that cause water quality problems could implement a program using the information already in the county databases. Example; Every property that is on an Individual Septic System pays a CSA12 Property Tax. With that information, the Environmental Health Department could join forces with the Tax Assessor and determine, a.) Properties paying CSA12 Tax, and b.) Properties that have not had a pumpers report filed showing the tank has been pumped in the last 2-5 years. The properties that have not pumped in 2-5 years should be sent a notice with their property tax bill stating that they need to get into compliance.
2. Another way to enforce this maintenance; every property owner paying CSA12 Tax would be required to submit a current pumpers report showing their

individual septic tank system is functioning properly. (not contributing to the water quality problem)

**Response to Comment 1**

The Water Board is not able to dictate the specific manner in which private or public property owners should ensure there is no discharge from their septic systems. Therefore staff is not able to use the ideas suggested by A-1 Septic Service. A-1 Septic Service may pass along these ideas to the Environmental Health Department and Tax Assessor.

In order to reduce/eliminate discharge from onsite wastewater disposal systems, the Water Board is relying on the "San Lorenzo Wastewater Management Plan" that the County of Santa Cruz is implementing. In the TMDL Project Report's implementation plan, we state that if the County is not making adequate progress towards implementing the Plan, the Central Coast Water Board will require owners of onsite wastewater disposal systems in the San Lorenzo River Subbasin to submit evidence to the Central Coast Water Board demonstrating they are not discharging from their onsite wastewater disposal systems.

Additionally, Water Board staff is in the process of developing revisions to existing Basin Plan criteria for onsite wastewater systems. The proposed criteria include recommendations and requirements for proper siting, design, maintenance and management of onsite wastewater systems. The proposed Basin Plan revisions also will require municipalities to develop onsite wastewater management plans (which the current criteria only recommend). In addition Water Board staff is in the process of developing a waiver of waste discharge requirements for owners of onsite wastewater systems that will ensure proper siting, design, maintenance and management. All owners of new onsite wastewater systems will have to enroll in the waiver if they plan to operate in areas without onsite wastewater management plans approved by the Executive Officer. Local permitting agencies will be required to characterize and address water quality impacts from existing onsite wastewater systems in management plans.

+++++

**Comments and Responses – Caltrans**

**Comment 2**

The Department supports efforts to protect the beneficial uses in these watersheds. However the Department has the following concerns about the draft language in proposed resolution.

- 1) We believe it should be recognized by the Regional Board, although not necessarily discussed in the Staff Report or a subsequent Implementation Plan, that runoff from Department's roadways during normal conditions is not a source of pathogens, based on extensive characterization studies.

**Response to Comment 2**

Water Board staff recognizes that rainwater that comes into contact with asphalt or concrete roadways, in the absence of any animal or human fecal material, would most likely not contain any pathogenic material. However, if a shoulder or overpass has areas where there are homeless encampments or animal excrement, the runoff from these areas may carry fecal material and subsequently the potential to carry pathogenic material.

**Comment 3**

The Department agrees with the Regional Board that homeless persons/encampments in the San Lorenzo River Subbasin and Aptos-Soquel Subbasin [which “may include the California State Department of Transportation” per the informational Staff Report For Regular Meeting of March 21, 2008”] must demonstrate compliance with [pathogens] prohibitions by:

1. Submitting documentation demonstrating there are no discharges from fecal sources by domesticated animals and/or homeless persons/encampments into waters of the San Lorenzo River Subbasin or Aptos-Soquel Subbasin, or
2. Submitting a nonpoint source pollution control implementation program for approval by the Executive Officer that is consistent with the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program*, May 20, 2004, or
3. Complying with Waste Discharge Requirements or an NPDES permit, or a conditional waiver of waste discharge requirements that explicitly addresses compliance with the:
  - a. Total Maximum Daily Loads for Pathogens in San Lorenzo River Estuary, San Lorenzo River, Branciforte Creek, Camp Evers Creek, Carbonera Creek and Lompico Creek
  - b. Total Maximum Daily Loads for Pathogens in Soquel Lagoon, Soquel Creek, and Noble Gulch
  - c. Total Maximum Daily Loads for Pathogens in Aptos Creek, Valencia Creek, and Trout Gulch.

Taking the entire San Lorenzo River hydrologic subarea (HAS) as the basis of comment: this HAS encompasses about 93,000 acres, and right of way associated with the Department’s approximately 60 centerline miles represents only about one percent of the watershed. Homeless encampments can sometimes be unobserved [sic] during routine maintenance activities. However, the actions to prevent such encampments, for example, by installing fences and signage, and these efforts could be documents in the Districts Work Plans, developed as part of the NPDES Permit/Caltrans Storm Water Management Plan (SWMP). It also should be noted that the Department does not have direct enforcement capabilities to remove people from the property, and would request that the California Highway Patrol perform this role.

**Response to Comment 3**

Staff agrees with Caltrans that compliance with the prohibition could be in the form of compliance with an NPDES permit for storm water, as this method of compliance is stated in the prohibition language. Furthermore, staff agrees with Caltrans that measures to address pathogen sources from homeless populations could be developed and described in conjunction with SWMPs associated with NPDES permits for stormwater.

**Comment 4**

Considering the limited areal extent, the other issues mentioned, and the recognition that additional efforts by the Department would be more difficult and costly to implement, with questionable benefits to water quality, we would recommend that R3 RWQCB consider excluding the Department from any additional requirements during the implementation phase for this TMDL.

**Response to Comment 4**

Staff acknowledges that Caltrans occupies a small percentage of the San Lorenzo River Watershed and that their contribution to the loading of fecal material (albeit by being a property owner with which animals or homeless may occupy) is most likely small. However, the staff cannot recommend excluding Caltrans from any additional requirements during the implementation phase for this TMDL.

+++++

**Comments and Responses – Santa Cruz County**

**Comment 5**

Project Report: p. 6 - The EPA freshwater objective for *E. coli* seems unreasonably low and has not been shown to be relevant for California. It has not been adopted by the State, and hopefully will not be unless further analysis demonstrates its appropriateness. There are significant problems with this target that need to be evaluated prior to application. The EPA work which resulted in this recommendation was conducted in waters affected by point source discharge of treated sewage and potentially has little bearing on waters influenced by non-point sources on the west coast. This is an argument being made with regard to marine water quality, where west coast epidemiologic studies have shown little or no correlation of illness to EPA standards. Additionally, parallel testing by Santa Cruz County has shown that in our area, fecal coliform results and *E. coli* results are not statistically different and can be used interchangeably. Again there is no local basis for changing the standard from 200 to 126. Based on the fecal coliform objective, only the lagoon and some of the tributaries would still be considered significantly impaired.

**Response to Comment 5**

Staff agrees with the entirety of your comment and offers an explanation below regarding the last sentence of your comment. Staff chose not to use *E. coli* as a numeric target in this TMDL based mostly upon reasons you mention above.

In response to your last sentence, staff re-evaluated the data (1/31/08) for the Estuary [Lagoon] and all the San Lorenzo River. As you stated, the Estuary is impaired. However, the remaining stations upstream from the Estuary along the San Lorenzo River show different results. Traveling from the Estuary, upstream to the highest sampling site (nine sampling sites in total which include County sites 022, 060, 07528, 149, 180, 241, 245, 290 and 300), 6/9 sites still exhibit impairment as defined by the State Water Resources Control Board's 2004 "Water Quality Control Policy For Developing California's Clean Water Act Section 303(d) List" (Table 3.2). There are three sites that would qualify for delisting status based on the County's fecal coliform data: San Lorenzo River at Sycamore Grove (022), San Lorenzo River @ Highlands Park (149) and San Lorenzo River above Love Creek (180). As you know (and can refer to Figure 6 on pg. 16 of the Project Report), these sites are in between "impaired" stations. Although three of these sites could be considered for delisting based on fecal coliform data, because of their location in between sites that exhibit impairment, staff concludes it makes sense to work on implementation measures throughout the watershed, with emphasis in areas that exhibit more impairment than others.

#### **Comment 6**

Project Report - Table 5: For stations where the percent exceedance of 400 MPN/100 ml is less than 10%, would it be correct to say that that objective is attained? Is 4% exceedance of the log mean at Sycamore Grove considered impaired? What percentage of exceedance is considered impaired? Isn't there a specific numeric criteria for the percentage of exceedance that defines impairment? Why are some tributaries included but others not (Boulder Creek, Bear Creek, Zayante Creek, Kings Creek)?

#### **Response to Comment 6**

For stations where the percent exceedance of 400 MPN/100 mL is less than 10% AND the geometric mean is less than or equal to 200 MPN/100 mL for a designated period, yes, it would be correct to say that the objective is attained. As you mention, Sycamore Grove (022) would not be considered impaired based on fecal coliform water quality objectives (see response to comment 5 above).

In terms of what percentage of exceedance defines impairment, this is a two-prong answer. 1) The Basin Plan's water quality objective for fecal coliform states that, "fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100mL, nor shall more than ten percent of total samples during any 30-day period exceed 400/100mL." Therefore, any time this objective is not met, it would be considered to exceed the water quality objective. 2) The State Board's "Water Quality Control Policy For Developing California's Clean Water Act Section 303(d) List" (Table 3.2) states that a location can be considered for listing on the Clean Water Act's 303(d) list (or considered "impaired") when the exceedances are around 16% and above. Therefore, in order to be considered "impaired" per the Listing Policy's definition, the station must exceed water quality objectives about 16% of the time or more.

Some tributaries are included, such as Branciforte Creek, Carbonera Creek and Lompico Creek because they are either specifically on the Clean Water Act's 303(d) list and/or have demonstrated impairment based on staff's data analyses as part of the TMDL Project Report. Tributaries that are not included, such as those you mention, are not included because 1) they are not on the 303(d) list, and 2) staff did not have data to confirm impairment in these areas.

**Comment 7**

Project Report – Why is seasonal data presented and discussed for *E. coli* only? There are weekly fecal coliform samples for the Trestle, Riverside Avenue, Sycamore Grove, Big Trees, Ben Lomond (ab Love Creek), and Boulder Creek (River Street). Keep in mind that Tait Street and Sycamore Grove are not the same locations. There is a substantial homeless population and recreational use of the river between Tait Street. and Sycamore Grove, which can be attributed to the higher bacteria levels and the spikes at Tait Street.

**Response to Comment 7**

Seasonal data is presented for fecal coliform and all the samples mentioned above (Trestle, Riverside Avenue, Sycamore Grove, Big Trees, Ben Lomond (ab Love Creek), and Boulder Creek (River Street)), in Table 15 and shown in graphic format in Appendix B. Staff realizes this may have been confusing for the reader, because the Project Report showed *E. coli* data in more of a seasonal breakdown in Table 6 and not fecal coliform until later in the report.

Staff corrected the language regarding Tait Street and Sycamore Grove in an earlier version. That correction appeared in the public comment version and subsequently in the final version to which this document is attached.

**Comment 8**

P. 31 - Why wasn't the county dataset used for the seasonal or annual breakdown at Big Trees and Sycamore Grove? It seems that it includes more samples. It also uses fecal coliform instead of *e coli*.

**Response to Comment 8**

The County's dataset is used for the seasonal breakdown at Big Trees and Sycamore Grove (Table 15 and Appendix B). Staff understands that the reader may have been confused by Table 6 because this table only shows *E. coli*. Table 6 was presented in this manner because there are no water quality objectives in our Basin Plan for *E. coli* and staff decided that analyzing *E. coli* geometric means by seasons was a good way to look at the data.

**Comment 9**

p. 32, For the reach above Henry Cowell Park, why are some of the stations with the lowest levels of fecal coliform (SLR @ Love Creek and SLR at Highlands Park) not mentioned? Why are some tributaries included but others not? The reach below Two Bar only exceeds 400 10% or less of the time. How is that impaired? During the dry

season? Table 15 and 16, seem to suggest that the stations in the River above the lagoon are not impaired, or in some cases impaired in only one or two months.

**Response to Comment 9**

Staff added language in this section that mentioned all stations and pointed out that some of these stations had low levels of fecal coliform concentrations. The reach above Two Bar Creek exceeds the 400 MPN/100 mL only 14% of the time. While staff acknowledges that this is a very low level of exceedance (and fairly “clean” compared to some other sites in our region), the site still minimally exceeds the water quality objective.

Tables 15 and 16 show the mean value of both the “geometric mean” and the “not to exceed value” with the mean included data taken from 2000-2006. This analysis simply tried to determine if there was a clear pattern of seasonality exhibited.

**Comment 10**

Presentation of Ribotype data should also indicate the load of bacteria at each point, ie, there is a much greater load of human originated bacteria in estuary.

**Response to Comment 10**

While staff finds the Proposition 13’s calculation regarding coupling fecal coliform concentrations and ribotyping percentages useful as a rough guide for looking at sources, staff concluded that this type of calculation should not be included in the Project Report. Ribotyping is not a quantitative method and coupling the percentages obtained from this study with fecal coliform concentrations may not be exact. Additionally, our State Scientific Peer Reviewer stated that, “Ribotyping is not a quantitative method. A certain number of isolates per water sample are analyzed and it is unknown whether the same numerical distribution of microbial host species would be obtained if 10 or 100 times as many isolates from the same water sample had been analyzed.” Therefore, staff chose not to include a load of fecal coliform at sampling stations that had ribotyping data associated with it.

**Comment 11**

p. 47 – Private lateral spills are underreported. One County staff person walking to and from work observed at least six instances of spills that occurred without knowledge of city staff in 2005-06. Any spill, even of small volume that reaches a storm drain, can inoculate that drain, with subsequent regrowth of bacteria, which would be indicative of a human source. Private laterals are a more likely source than recreational vehicle discharge.

**Response to Comment 11**

Private laterals are listed as a source of fecal coliform in the Project Report and implementation actions are noted in order to address this source. We noted that “spills” don’t seem to be a significant problem (meaning spills seem to be larger in volume and occur in low frequency), whereas “leaks” seem to be more problematic (meaning leaks

may be lower in volume but occur at a higher frequency). Please see Section 4.1.1.a.5. and Section 10.1.2. for specific language.

**Comment 12**

p. 48 – For consistency with other data, storm drain data should be summarized by geometric mean, not average. Some drains are relatively low compared to others. There is substantial variability and the results of these drains cannot be attributed to the whole watershed. Conditions affecting the lower river drains would cause them to be much higher.

**Response to Comment 12**

Staff agrees that summarizing storm drain data by geometric mean is preferable and changed this presentation in the Project Report. Staff acknowledges the variability of the results from storm drain sampling and did not attribute it to the whole watershed.

**Comment 13**

P. 51-52 – Why wouldn't resolution 95-04 apply within Scotts Valley? It refers to discharges within the watershed?

**Response to Comment 13**

Resolution 95-04 does apply to areas within Scotts Valley that are outside the City limits and have onsite disposal systems. The resolution does not apply to areas within the City limits because a majority of the City is sewerred and the dwellings that are not sewerred will be connecting soon (there are only about 25-40 systems left).

**Comment 14**

Table 15 and 16, seem to suggest that the stations in the River above the lagoon are not impaired, or in some cases impaired in only one or two months. The seasonality discussion and supporting table seems confusing. The discussion says there is no seasonal variation, but most of the tables either indicate the station does not exceed standards in any season or that the data is insufficient to determine seasonality. The info in the tables is confusing, what is the difference between the two rows of data with different means and medians presented for each station?

**Response to Comment 14**

Tables 15 and 16 were an attempt to take a large amount of sampling stations, from 2000-2006 and try and determine if there were any clear seasonal patterns. Because staff was using mean values (averaged over about five years), these tables cannot be used to determine impairment directly. For example, one station may have had true exceedances for July in 2000, 2003 and 2005. However, in July of 2001, 2002, 2004, the levels were below water quality objectives. Averaging these sampling events together shows the mean values "attain objectives." However, if there is a site that has clear exceedances, year after year, perhaps in the winter months, these exceedances will appear in this table.



Staff removed the median values from the tables in an effort to make the tables more clear.

**Comment 15**

p. 75 – I don't believe it is likely that controlling controllable sources will ever result in attainment of current bacteria objectives in the lagoon. See the calculation of loading and projected bacteria levels in the Prop 13 Beach Water Quality report. In order to get levels below 200, we had to project reducing bird contributions by 30% and wildlife contributions by 50%. The lower river or the watershed cannot be compared directly to an undeveloped watershed. We can do more to reduce the controllable sources, but I don't believe we can ever fully mitigate the impacts of urbanization. Certainly not without an unlimited budget.

**Response to Comment 15**

Staff agrees that there may be a possibility that controlling the controllable sources may not attain current bacteria objectives in the lagoon. However, the TMDL Project Report shows that there are still sources of anthropogenic and domesticated animal fecal material in the lagoon. Until these sources are eliminated, we are unable to say with any confidence that natural sources alone will continue to exceed objectives.

You are correct in stating that the lower river and watershed cannot be compared directly to an undeveloped watershed. As stated in the Project Report, "Staff acknowledges that the San Lorenzo River Estuary is a waterbody heavily influenced by urban sources of fecal indicator bacteria, whereas Waddell and Scott's Creek are much less developed with less human presence in their watersheds. Therefore, staff offers the above example as more of an indirect comparison, showing concentrations of fecal indicator bacteria that more "natural" waterbodies may exhibit in this area, and not to show a direct comparison to other urban waterbodies that are achieving numeric targets."

Fully mitigating the effects of urbanization is dubious, as you mention. However, controlling all controllable sources of fecal input as much as possible is what staff is proposing.

**Comment 16**

p. 85: Implementing measures to address discharges from homeless encampments will be challenging and likely require efforts beyond the capabilities of individual property owners.

**Response to Comment 16**

Staff acknowledges this issue is a challenging one, socially, economically and practically. Staff will work with stakeholders affected by this issue to help effect change.

**Comment 17**

p. 107 – The monitoring costs used by staff are low. Our costs are \$40 for sample collection and field analysis plus \$20 for each bacteria analysis. Monitoring for fecal

coliform and e coli would thus cost \$80/sample. The discussion of costs for stormwater program should indicate that there is presently no mechanism to collect the costs from individual property owners short of a prop 218 vote, which may or may not be approved.

**Response to Comment 17**

Staff made the changes you mentioned above by correcting costs and including the language recommended regarding the stormwater program.

**Comment 18**

p. 110 – Was there meant to be an actual tabular cost summary? That would be helpful to calculate and show the costs for each element, particularly the cost for successfully addressing the homeless encampments. It is questionable whether or not the latter would be cost-effective.

**Response to Comment 18**

Staff included a tabular cost summary.

**Comment 19**

Staff report, P. 6 – Staff suggests that future work could show that natural sources are causes of impairment. That work has already been done in the Beach Water Quality Report and is not likely to be repeated unless more grant money is provided. The peer reviewer also suggests that more work be done to address fecal indicator bacteria loads. That was also done in the Beach Water Quality Report. Continuous flow data to calculate loads is available for San Lorenzo at Big Trees and San Lorenzo at Santa Cruz (downstream of Tait Street, just above the estuary).

**Response to Comment 19**

Staff acknowledges that there are a large amount of natural sources in this watershed. However, there are also known sources from human influenced activities. Regardless of the natural input, fecal input from human or domesticated animals should be eliminated/reduced. Staff chose to express the TMDL in terms of concentration, and not load, because the water quality objective is expressed in terms of concentration. Expressing TMDLs in terms of concentration is an acceptable method ((see 40 CFR 130.2(i)).

**Comment 20**

Resolution, Page 16: Reference should be to the San Lorenzo Wastewater Management Plan, not the Nitrate Management Plan.

**Response to Comment 20**

Staff corrected this.

+++++

Staff made additional changes to the public review draft of the San Lorenzo River TMDL. These changes were based on internal comments from Water Board staff. These changes included:

- 1) Modifying the prohibition language to extend to prohibition of human waste from all areas, not only from homeless encampments.
- 2) Modifying the language regarding implementation efforts as they pertain to private laterals.
- 3) Adding or deleting minor language throughout the document that improves the readability yet does not change the meaning.

S:\TMDLs & Watershed Assessment\TMDL and Related Projects- Region 3\San Lorenzo Wtrshd post 6302007\6 Regulatory Action\Final RB Agenda Item March 21, 2008\SLR PATH TMDL ATT 7 PubCom 21Mar08.doc